

# NASA TECH BRIEF

## Marshall Space Flight Center



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### Beam Lead Forming Tool

#### The problem:

Manufacturers of flat pack electronic devices, such as integrated circuit packages, have a variety of tools for bending the beam leads. Most of these tools, however, are designed for bending the leads to a fixed angle.

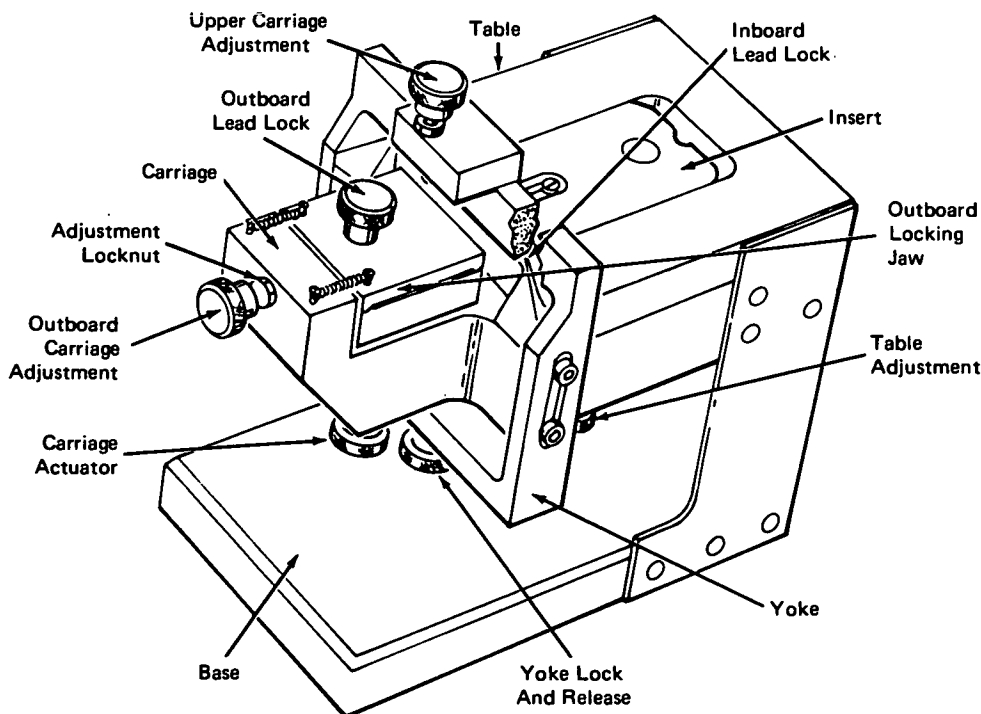
#### The solution:

A tool was designed for table-top manual operation that can bend leads to any desired angle up to 90°. It can be readily adapted to electrical, hydraulic, or pneumatic operation.

#### How it's done:

The tool can handle lead lengths to 1/4 inch (0.6 cm). The desired angle of the lead is formed by positioning

the flat pack on the tool table (see figure) and the table adjusted vertically to align the lower side of the lead with the inboard lead lock of the yoke. The lead is then inserted and locked between the jaws of the yoke. The carriage is then adjusted to a specified length required for the bend. The adjusting screws and the insert are preset to the required position dictated by the bend of the leads, and the outboard locking jaw of the carriage locked on the other end of the lead. The carriage is then moved upward by means of a carriage actuator until it has reached the upper adjustment screw which stops the carriage at the preset bend angle. As the final step of the operation, the yoke lock is released and adjusted vertically to clear the bent lead, the outboard locking jaw is released, and the flat pack removed from the device.



(continued overleaf)

**Notes:**

1. Information concerning this innovation may be of interest to the electronics, sheet metal, and appliance industries.
2. Requests for further information may be directed to:  
Technology Utilization Officer  
Marshall Space Flight Center  
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Reference: B73-10098

**Patent status:**

Inquiries concerning rights for the commercial use of this invention should be addressed to:

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